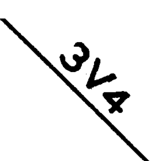




3V4
POWER PENTODE

MINIATURE TYPE

GENERAL DATA

Electrical:

Filament, Coated:

Filament arrangement	*Series**	*Parallel***	
Voltage	2.8	1.4	volts
Current	0.05	0.1	amp

Direct Interelectrode Capacitances (Approx.):° ←

Grid No.1 to plate	0.20	μμf
Grid No.1 to filament (mid-tap) & grid No.3, and grid No.2	5.5	μμf
Plate to filament (mid-tap) & grid No.3, and grid No.2	3.8	μμf

Mechanical:

Mounting Position . . . . Any
Maximum Overall Length . . . . 2-1/8"
Maximum Seated Length . . . . 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip). 1-1/2" ± 3/32"
Maximum Diameter . . . . 3/4"
Bulb T-5-1/2
Base . . . . . . Small-Button Miniature 7-Pin (JETEC No.E7-1) ←
Basing Designation for BOTTOM VIEW 6BX

Pin 1 - Filament (-series)
Pin 2 - Plate
Pin 3 - Grid No.2
Pin 4 - No Connection-Do Not Use
Pin 5 - Filament Mid-Tap (-parallel), Grid No.3
Pin 6 - Grid No.1
Pin 7 - Filament (+)

AMPLIFIER - Class A_1

Maximum Ratings, *Design-Center Values:*

	*Series**	*Parallel***	
PLATE VOLTAGE	90 max.	90 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	90 max.	90 max.	volts
TOTAL MAXIMUM-SIGNAL CATHODE CURRENT	6# max.	12 max.	ma
TOTAL ZERO-SIGNAL CATHODE CURRENT	6# max.	12 max.	ma

Typical Operation and Characteristics:

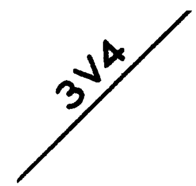
	*Series**	*Parallel***		
Plate Voltage	90	85	90	volts
Grid-No.2 Voltage	90	85	90	volts

° Without external shield.

For each 1.4-volt filament section. For series operation of the sections, a shunting resistor must be connected across the section between pins No.1 and No.5 to bypass any cathode current in excess of the rated maximum per section. When other tubes in series filament arrangement contribute to the filament current of the 3V4, an additional shunting resistor may be required between pins No.1 and No.7.

*,**: See next page.

← Indicates a change.





3V4

POWER PENTODE

	Series*	Parallel**		
Grid-No.1 (Control-Grid) Voltage	-4.5	-5	-4.5	volts
Peak AF Grid-No.1 Voltage	4.5	5	4.5	volts
Zero-Sig. Plate Current	7.7	6.9	9.5	ma
Zero-Sig. Grid-No.2 Current	1.7	1.5	2.1	ma
Plate Resistance (Approx.)	0.12	0.12	0.1	megohm
Transconductance	2000	1975	2150	μmhos
Load Resistance	10000	10000	10000	ohms
Total Harmonic Distortion	7	10	7	%
Max.-Signal Power Output	240	250	270	mw

→ **Maximum Circuit Values (For maximum rated conditions):**

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	2.2 max.	megohms
For cathode-bias operation	2.2 max.	megohms

→ **Typical Operation with Single Filament Section:●**

Filament Voltage	1.4	volts
Filament Current	0.05	amp
Plate Voltage	90	volts
Grid-No.2 Voltage	90	volts
Grid-No.1 Voltage	-4.5	volts
Peak AF Grid-No.1 Voltage	4.5	volts
Zero-Signal Plate Current	4.8	ma
Zero-Signal Grid-No.2 Current	1.1	ma
Plate Resistance (Approx.)	0.2	megohm
Transconductance	1100	μmhos
Load Resistance	20000	ohms
Total Harmonic Distortion	7	%
Maximum-Signal Power Output	135	mw

→ **Maximum Circuit Values (For maximum rated conditions):**

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	2.2 max.	megohms
For cathode-bias operation	2.2 max.	megohms

* Filament voltage applied across the two sections in series between pins No.1 and No.7. Grid-No.1 voltage is referred to pin No.1.

** Filament voltage applied across the two sections in parallel between pin No.5 and pins No.1 and No.7 connected together. Grid-No.1 voltage is referred to pin No.5.

● Either filament section may be operated singly with the other section floating. It is to be noted, however, that such operation may impair the emission capabilities of the unused section. Although in subsequent operation the unused section may be operated in series with the used section, it should not be operated singly.

Curves shown under Type 3Q4 also apply to the 3V4

→ Indicates a change.